Title: **APPARATUS AND METHODS FOR FORWARD ERROR CORRECTION
DECODING**

ABSTRACT OF THE DISCLOSURE

An apparatus includes an instruction decoder, at least one control register coupled
to the instruction decoder, and an add-compare-select (ACS) engine coupled to the at
least one control register. The instruction decoder is operative to control the ACS engine
to perform Viterbi decoding in response to the instruction decoder receiving a first
instruction, and is operative to control the ACS engine to perform turbo decoding in
response to the instruction decoder receiving a second instruction.

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